



Preservation of Outdated Media

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Utah Division of Arts and Museums

June 16, 2022

11 am - 1 pm



NATIONAL
ENDOWMENT
FOR THE
HUMANITIES



UTAHHUMANITIES

Ideas in Action



Utah Division of
Arts & Museums

INTRODUCTIONS

Please share: Your name, where you work, your role there



INTRODUCTION

Meet the presenter!



Utah State University Merrill-Cazier Library
Image: usu.edu



Historic Arkansas Museum
Image: Department of Arkansas Heritage



Markus Wasmeier Freilichtmuseum (Open-Air Museum)
Image credit: Markus Wasmeier Open-Air Museum

WHAT WE ARE GOING TO COVER IN THIS WORKSHOP

- Types of storage media
- Media stability and obsolescence
- Steps to take before considering digitization
- Digitization
 - How to prioritize for digitization
 - In-house versus outsourced digitization
- (briefly) File Migration for Digital Storage Media
- Preservation of storage media and digital files
- Funding and additional training opportunities

- ❖ What we are not going to cover
- ❖ Opportunities for questions



TERMS (AND ONE ABBREVIATION)



- **Storage media/medium**
 - Physical/analog storage media: To access the content on physical storage media you either need special playback equipment (VCR, tape player) or you need to have it digitized.
 - Digital storage media: Storage media that you can access by plugging it into or inserting it into a computer. It contains digital files.
- **Analog content**: Content that did not initially start out as a digital file (e.g., photographic film, a handwritten letter, microfilm, VHS tapes). When analog content is digitized, you can refer to it as reformatted content or analog-to-digital content.
- **Born-digital content/files**: Content that originated in a digital format (e.g., photos on your phone, podcasts, a Word document).
- **Digital preservation**: *Digital preservation combines policies, strategies and actions that ensure access to digital content over time* (ALA, 2008).
- **Preservation master**: Sometimes referred to as preservation copy. High quality digital file; it will be a larger file size because the high quality increases the size. It is often an uncompressed file, meaning that all of the information (pixels, frequencies, etc.) is present even if not discernible by the human senses. Your preservation masters are the focus of your digital preservation efforts.
- **Access/distribution copy**: This is a lower quality file used to distribute to researchers or load to a website. When a preservation copy is converted to an access copy, the file information is compressed which means it will be a smaller file size.
- **Mountain West Digital Library (MWDL)**: The MWDL provides a regional search portal for public access to the digital collections of the Mountain West; it is a group of member repositories (mostly academic libraries in the mountain west region) whose digital collections are searchable through the MWDL website at mwdl.org. The member repositories also host digital collections for smaller partner organizations.

(SOME) TYPES OF STORAGE MEDIA



All images from the Museum of Obsolete Media

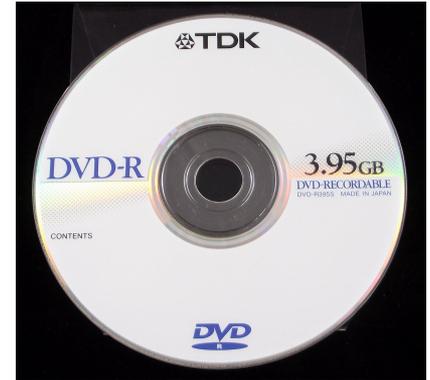
AUDIO

- Phonograph discs and cylinders
 - Grooved discs (vinyl, acetate records)
 - Wax cylinders
- Magnetic tape for audio
 - Open reel audio tapes
 - Audio cassette tapes
- Optical discs for audio
 - CD (Compact Disc)
 - CD-R (Compact Disc Recordable)



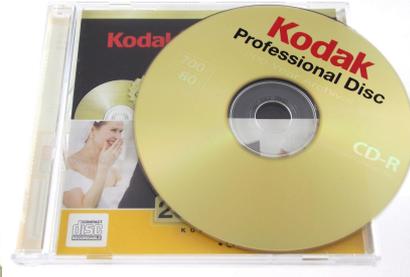
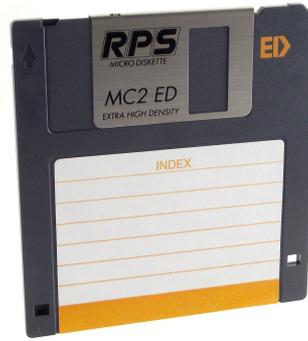
VIDEO

- Magnetic tape for video
 - VHS (Video Home System)
 - Betamax
 - U-matic
- Optical discs for video
 - LaserDisc
 - DVD & DVD-R (recordable)



DATA

- Disks/Discs for Data
 - Floppy disks
 - Gold CD-R
 - Hard Disk Drive and External Hard Drive
- Solid State Media
 - USB Flash Drives
 - Secure Digital (SD) Cards



FILM

- Microphotography
 - Microfiche
 - Microfilm
- Motion-picture photography
 - 35mm motion-picture film



MEDIA STABILITY AND MEDIA OBSOLESCENCE

Media Stability

Concerned with how long different types of storage media will last

Media Obsolescence

Concerned with the availability of equipment or software to be able to access different types of storage media



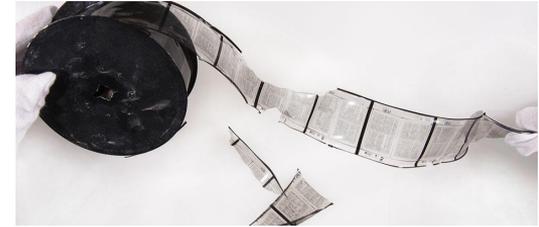
THREATS TO STORAGE MEDIA STABILITY: FILM

Types of film bases and examples of decay:

- Cellulose nitrate
 - Base/Gelatin decomposition
 - Embrittlement
 - Distortion
 - Mold and fungus
- Cellulose acetate
 - Delamination/char
 - Embrittlement
 - Distortion
 - Mold and fungus
- Polyester
 - Mold and fungus



Base/Gelatin decomposition



Embrittlement



Delamination/channeling



Distortion



Mold growth

THREATS TO STORAGE MEDIA STABILITY: GROOVED MEDIA

- Wax cylinders
 - Playback can cause severe wear
 - Prone to cracks
 - Extremely fragile
- Grooved discs
 - Prone to warping and cracking
 - Delamination
 - Experiences wear with playback



Broken wax cylinder
Image credit:
Preservation Self-Assessment Program,
University of Illinois



Delamination of a disc
Image credit: Northeast
Document Conservation Center

THREATS TO STORAGE MEDIA STABILITY: OPTICAL MEDIA

- Improper handling
 - Scratches
 - Cracks
 - Fingerprints
- Improper storage
 - Mold
 - Dust
 - Disc rot
 - Delamination



Top (left) and bottom (right) view of CD-R delamination

Image credit: Preservation Self-Assessment Program, University of Illinois

Example of disc rot on a CD

Image credit: Preservation Self-Assessment Program, University of Illinois



THREATS TO STORAGE MEDIA STABILITY: MAGNETIC MEDIA

- Sticky Shed Syndrome
- Improper handling
 - Fingerprints, smudges
 - Uneven tape pack
- Damage from playback equipment
- Poor storage conditions
 - Extreme temperature fluctuations, hu
 - Mold, dust, fungus, pests
- Demagnetization
- Unintended recording

SAFE MODE ►



RECORD
MODE ►



Preventing unintended recording
Image credit: Texas Commission on the Arts

WHAT CONTRIBUTES TO MEDIA OBSOLESCENCE?

- Playback equipment is no longer manufactured
- Replacement parts for playback equipment are hard to find
- Lack of trained professionals skilled in repairing and operating equipment
- The storage medium is no longer produced
- The storage medium is no longer in common use
- The storage medium is replaced with a new format



Reel-to-reel audio tape player/recorder
Image credit: Preservation Self-Assessment Program, University of Illinois



Sony S-VHS VCR

Image credit: DRs Kulturarvsprojekt is licensed under CC BY-SA 2.0.

DIGITAL FILE FORMAT OBSOLESCENCE

- Reasons for file format obsolescence
 - Software upgrades fail to support legacy files
 - The format is replaced by another version or increases in complexity
 - The format acceptance is low
 - Software supporting the format fails in the marketplace
 - Software supporting the format is bought by a competitor and no longer supported



Image credit: "Windows 98" by alvarezperea is licensed under CC BY-NC 2.0.

CHECK IN

QUESTIONS?

BREAK (5 Minutes)



WORKING WITH YOUR HOLDINGS

ERWAY'S PRINCIPLES

Ricky Erway's four principles for responsible management of files received on physical media:

1. Do no harm
(to the physical media or the content).
2. Don't do anything that unnecessarily precludes future action and use.
3. Don't let the first two principles be obstacles to action.
4. Document what you do.

From Erway, Ricky. 2012. *You've Got to Walk Before You Can Run: First Steps for Managing Born-Digital Content Received on Physical Media*. Dublin, Ohio: OCLC Research.
<https://www.oclc.org/content/dam/research/publications/library/2012/2012-06.pdf>

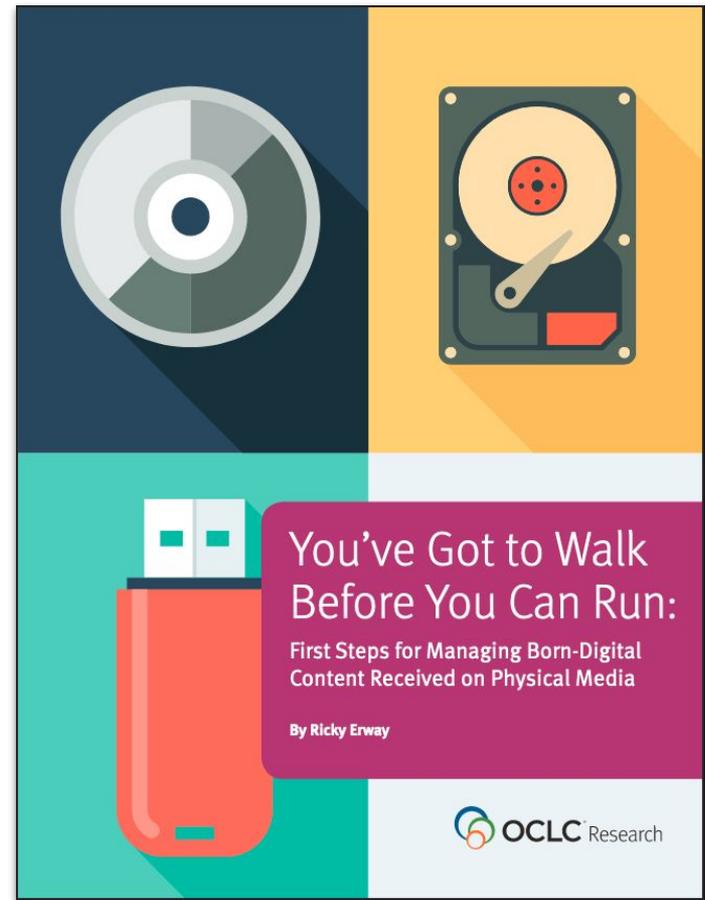


Image credit: OCLC Online Computer Library Center, Inc (CC BY 3.0)
Modification: Edited to only include cover.

CREATING AN INVENTORY

1. Inventory number
2. Location
3. Collection
4. Type of storage media
5. Quantity
6. Information known about the content
7. Condition

A Collection Title	A Collection #	A Sub-Collectio...	A Box #	A Item #	Description	A Da	Format ...	✓
The Marie Fuhriman Olsen Oral History Colle...	USU_FOLK COLL 50		5	6	Item 4: CDTransfer from Cassette tape to CD: tape 1 side A		Compact Di...	
The Marie Fuhriman Olsen Oral History Colle...	USU_FOLK COLL 50		5	6	Item 5: CDTransfer from Cassette tape to CD: tape 1 side B		Compact Di...	
The Marie Fuhriman Olsen Oral History Colle...	USU_FOLK COLL 50		5	7	Item 1: Tape	1980 ...	Cassette Ta...	
The Marie Fuhriman Olsen Oral History Colle...	USU_FOLK COLL 50		7	6	Item 1: Tape	1982	Cassette Ta...	
Deseret String Band Collection, 1970-1999	USU_FOLK COLL 52	Sound Media, 1974...	3	1	Sound Media: Vinyl Recording, 45: title	1974-...	Vinyl Record	
Deseret String Band Collection, 1970-1999	USU_FOLK COLL 52	Sound Media, 1974...	3	2	Sound Media: Vinyl Recording, LP, Land of Milk and Honey	Undat...	Vinyl Record	
Deseret String Band Collection, 1970-1999	USU_FOLK COLL 52	Sound Media, 1974...	4	1	Audio/Visual Media: VHS TapeDeseret String Band, Rough Cut/Digital ...	Undat...	VHS Casse...	
Deseret String Band Collection, 1970-1999	USU_FOLK COLL 52	Sound Media, 1974...	4	2	Audio/Visual Media: VHS TapeThe Frontier: Rediscovering America, Jo...	Undat...	VHS Casse...	
Deseret String Band Collection, 1970-1999	USU_FOLK COLL 52	Sound Media, 1974...	4	3	Audio/Visual Media: VHS TapeFiddle Tunes, Deseret String Band (120:...	1992	VHS Casse...	
Deseret String Band Collection, 1970-1999	USU_FOLK COLL 52	Sound Media, 1974...	4	4	Audio/Visual Media: VHS TapeFiddle Tunes	1990 ...	VHS Casse...	
Deseret String Band Collection, 1970-1999	USU_FOLK COLL 52	Sound Media, 1974...	4	5	Audio/Visual Media: VHS TapeLydia's Program	Undat...	VHS Casse...	
Deseret String Band Collection, 1970-1999	USU_FOLK COLL 52	Sound Media, 1974...	5	1	Sound Media: 5-Inch Reel to Reel TapeOkehdokee-Tails Cut 2	Undat...	Reel-to-Reel	
Deseret String Band Collection, 1970-1999	USU_FOLK COLL 52	Sound Media, 1974...	5	2	Sound Media: 5-Inch Reel to Reel TapeCarbon County Music Master	1976	Reel-to-Reel	
Deseret String Band Collection, 1970-1999	USU_FOLK COLL 52	Sound Media, 1974...	5	3	Sound Media: 5-Inch Reel to Reel Tape"Oh Sisters" Soundtrack, Out-T...	Undat...	Reel-to-Reel	

Screengrab of a portion of the media inventory we are creating at the Merrill-Cazier Library

STORAGE ENVIRONMENT

- Stable temperature and humidity levels
- Proper archival enclosure
- Storage orientation
 - Film=Flat
 - Video (and Audio)=Vertical
- Specific guidelines for different types of storage media
- Any step you can take towards better storage conditions is helpful!

Image of open reel tapes stored vertically

Image credit: Preservation Self-Assessment Program, University of Illinois



Image of film stored flat

Image credit: DRs Kulturarvsprojekt under CC BY-SA 2.0.

PRIORITIZING FOR DIGITIZATION

- What is digitization?
- You don't have to digitize everything
- How to decide where to focus your resources
 - Using a rating system to rate each object on the following categories:
 - Media stability
 - Media obsolescence
 - Value to your institution
 - Level of use
 - Uniquity
 - Other categories that are important to your institution



NEDCC Audio Preservation Control Room
Image credit: Northeast Document Conservation Center

MEDIA STABILITY



All examples have exceeded their expected lifespan, and are likely to be degraded. In need of urgent digitization.



High risk of degradation even with good storage, and migration needs to take place soon. Many examples of this format have reached the end of their expected lifespan.



Some risk of degradation, and early examples of this format may be reaching the end of their expected lifespan



Small risk of degradation, but most examples of this format are within their expected lifespan



With good storage, even early examples are likely to be usable for the foreseeable future

MEDIA OBSCOLESCENCE



Equipment capable of reading or transcribing the media may be very specialist, rare, or difficult or expensive to maintain.



Equipment capable of reading the media may be increasingly rare, or difficult or expensive to maintain.



Equipment capable of reading the media may not be readily available, or may need to be carefully maintained.



The format is no longer current but may still be in use, and equipment capable of reading the media is still relatively common even if no longer produced.



Equipment capable of reading the media is still produced, or is still widely available (perhaps because of backwards compatibility, adaptors, or alternatives such as scanning of film negatives)

VALUE TO YOUR INSTITUTION

- Value of the content to your institution and mission
- Value can be subjective - decide what it means for your institution
- What if you don't know what is on the physical storage media? How do you determine if it is valuable?
 - Can make assumptions because of an association with a collection or donor
 - Get a sample digitized to know more about the contents



1/2" open reel video, no descriptive labeling.

Image by Lori Dedeyan, available under CC BY-NC-SA 2.0. Courtesy of UCLA Library Special Collections.

LEVEL OF USE

- Anticipated usage
 - Anniversary or upcoming event
 - Intuition that the content will be high use once people know it exists
- Past usage
 - Do patrons frequently request access to the content?



Students using microfilm readers, 1960s.

Image credit: Utah State University Historical Photo Collection, photo no. USU-A0209c

UNIQUITY

- Is it digitized elsewhere?
Do a search online.
- Just because something is old doesn't mean it is unique.
- If you think you have the only copy of this content then it is a higher priority



Image from USU Digital History Collections: KVNU Audio Recordings
<https://digital.lib.usu.edu/digital/collection/p16944coll136>



PRIORITIZING FOR DIGITIZATION

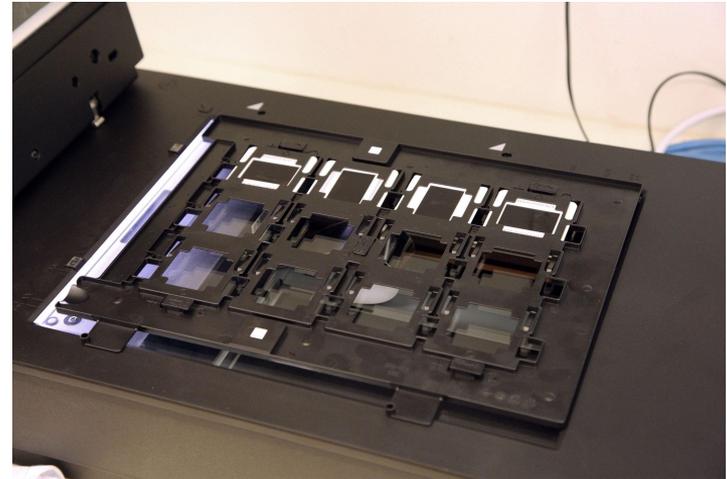
- Basic rule of thumb: If the format is critically endangered (stability or obsolescence) and the content does not exist elsewhere, it should be a high priority for digitization.



DIGITIZATION AND FILE MIGRATION

IN-HOUSE DIGITIZATION

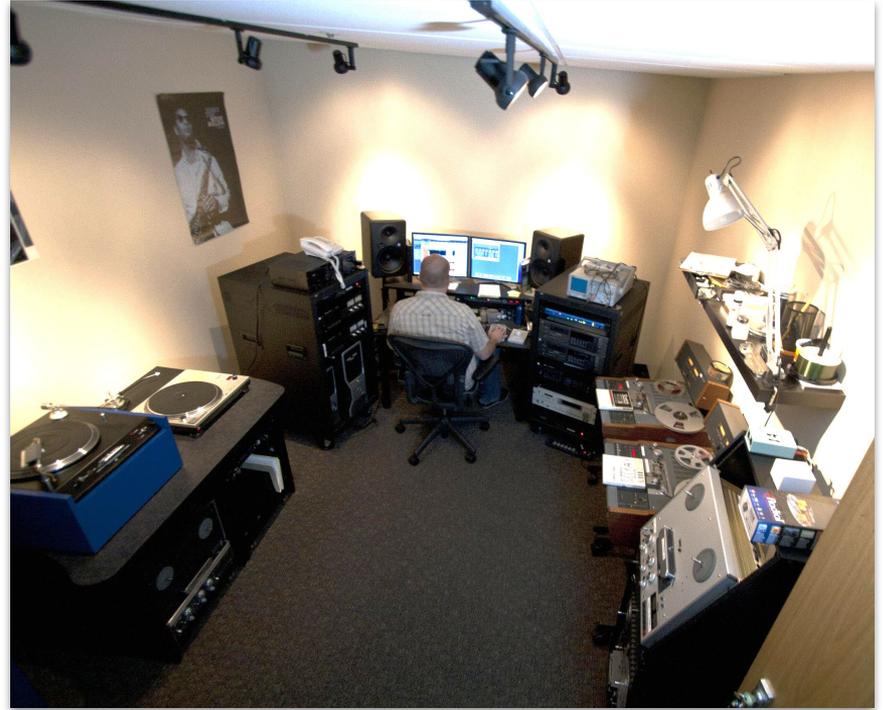
- Question to ask yourself before considering in-house digitization:
 - What type of digitization equipment do you need to purchase? How much is it?
 - Can you operate and maintain that equipment?
 - If there are conservation issues with the storage medium, do you have the skills on staff to properly handle and digitize the object?
 - Do you have the staff time to devote to training on proper digitization of each storage medium?
 - Do you have the staff time to dedicate to performing the digitization?
 - What specifications should you use when doing the digitization? And what file formats should you create?
 - Keep in mind that there could be unexpected costs once you start a project – do you have that kind of cushion in your budget?



Transparency scanners in the USU Merrill-Cazier Library
Photos credit: Lauryn Parent

OUTSOURCED DIGITIZATION

- Benefits of working with a vendor for digitization:
 - They already have the training and expertise on staff
 - They have staff dedicated to perform the digitization work
 - They have specialized equipment to digitize different types of storage media
 - There are vendors that can handle different types of conservation concerns with storage media
 - They are responsible for maintaining and operating the digitization equipment
 - There are vendors who know what file formats and digitization specifications to use when creating digital files
 - There are more predictable costs for your digitization project.



Audio Lab at Stanford University Libraries.
Image by suldpg, available under CC BY-NC-SA 2.0. Courtesy of Stanford University Libraries Digital Production Group.

SELECTING A VENDOR

- Considerations when selecting a vendor:
 - Does the vendor specialize in digitization for long-term preservation?
 - If you have conservation concerns, are they capable of handling your specific needs?
 - Do they have other archival and cultural heritage institutions as past clients?
 - Are they capable of digitizing your specific storage media types?
 - Obtain bids from a few different vendors.
 - Does the vendor have a minimum order size?
- Communicate with potential vendors about your expectations, timeframe, and budget.



There are a lot of organizations who do digitization work. These are some examples the presenter is familiar with.

WHAT THE VENDOR WILL NEED FROM YOU

- An inventory of what you want digitized
 - Include: storage media type, descriptive information, inventory number, conservation concerns
- Confirm the digitization specifications they will use and file formats they will create
- What file naming convention they should use to name the files
- Perform a quality check on the files they send back to you. Is everything there?

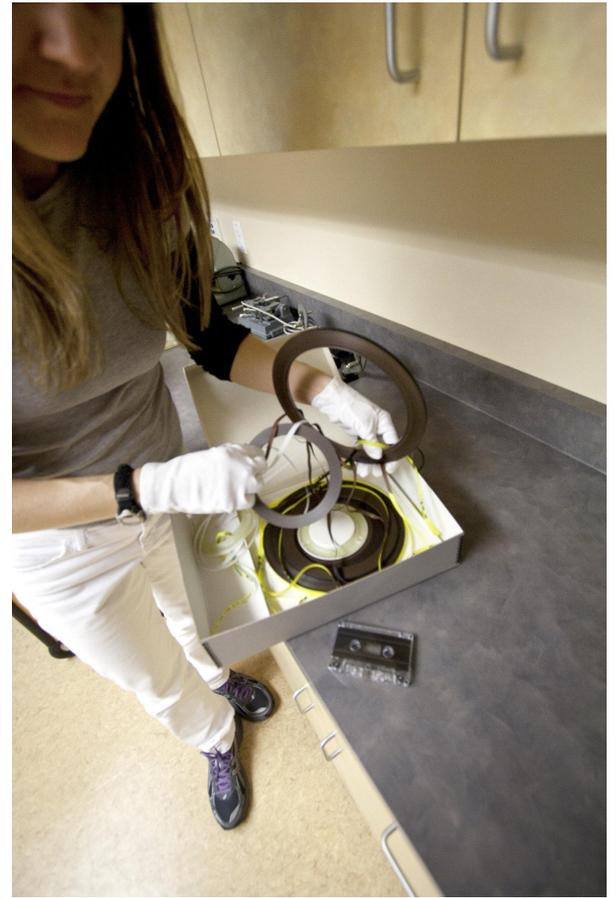


Stanford Media Preservation Lab - Video Lab at Stanford University Libraries.

Image by suldpg, available under CC BY-NC-SA 2.0. Courtesy of Stanford University Libraries Digital Production Group.

WHAT THE VENDOR WILL PROVIDE FOR YOU

- Appropriate shipping materials or advisement on how to properly package and ship your objects
- Digital files (access copies and preservation masters) - often sent to you on an external hard drive that you will need to ship back
- Inventory of what the digitized along with any objects that were blank or too damage to digitize
- They will send back your physical storage media

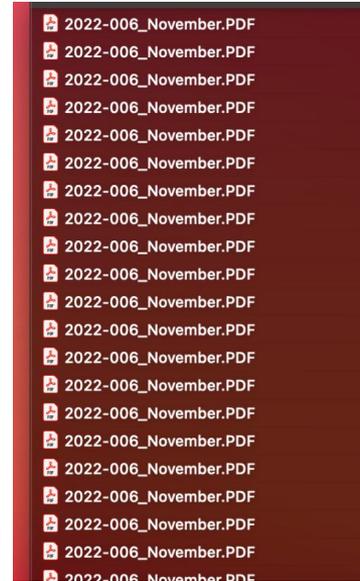


Stanford Media Preservation Lab at Stanford University Libraries.

Image by suldpg, available under CC BY-NC-SA 2.0. Courtesy of Stanford University Libraries Digital Production Group.

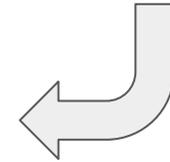
HOW TO NAME YOUR DIGITAL FILES

- Document your convention(s)
- Think about how you want your files to sort and organize
 - Biggest to smallest container
- Don't count on the folder name to help identify the files inside; the file names need to be able to identify the file on their own
- Avoid spaces and special characters other than -_
- Try not to create excessively long filenames
- Use scalable numbering 001, 002



If you were to remove all of your files from their separate subfolders, would they have unique filenames?

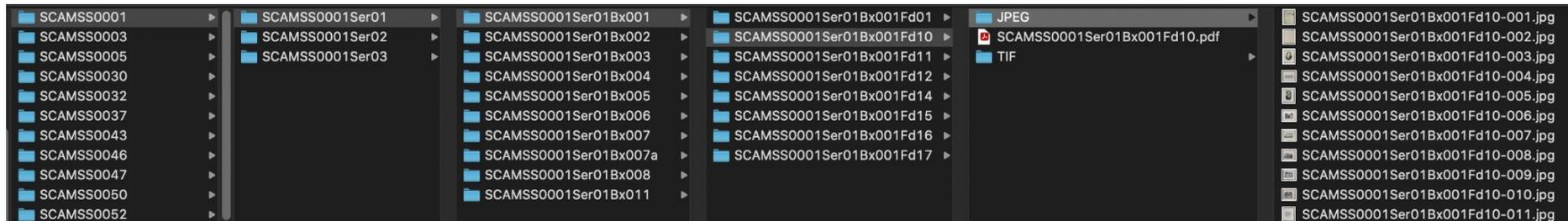
You want to avoid this



Examples from USU

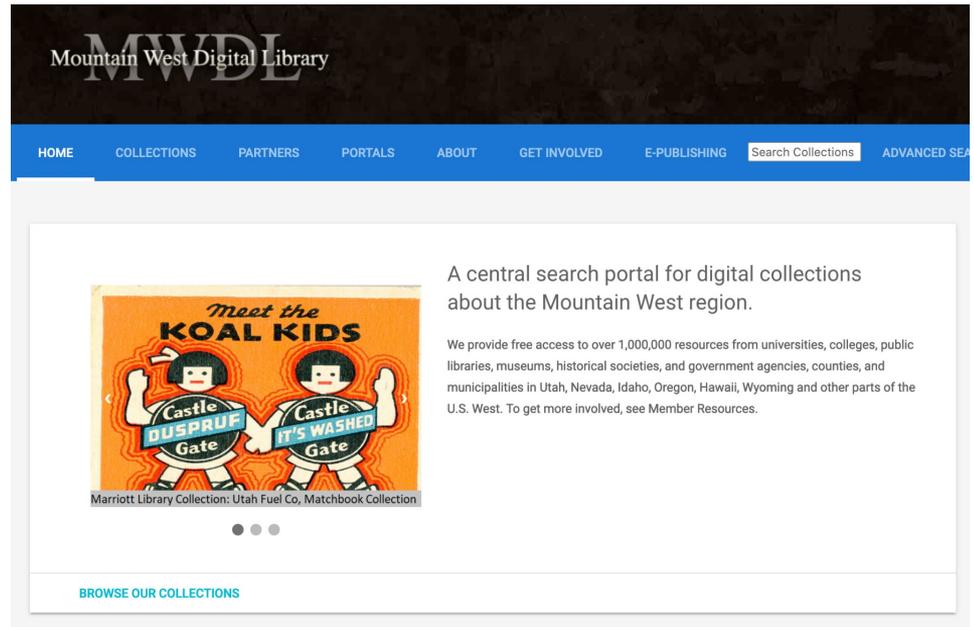
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MOUNTAIN WEST DIGITAL LIBRARY (MWDL)

- The MWDL is a group of member repositories (including the U, USU, UVU, BYU, SUU) whose digital collections are searchable through the MWDL
- The MWDL provides a regional search portal for public access to the digital collections of the Mountain West
- Content with MWDL is searchable in the Digital Public Library of America search portal
- Many of the member repositories can serve as a vendor for outsourced digitization work
- Member repositories can host digital content online for smaller partner institutions
- If you partner with an MWDL repository for digitization your digital content can reach a wider audience
- How to contact MWDL to discuss partnership opportunities and working with a member repository for digitization.
 - <https://forms.lib.utah.edu/mwdl-contact/>



MWDL Homepage (mwdl.org)

DIGITAL PUBLIC LIBRARY OF AMERICA (DPLA)

- A search portal for the digital content hosted by regional (like MWDL) and state search portals across the US.
- If your digital content is hosted by an MWDL member repository it will be searchable in the DPLA.



A screenshot of the DPLA homepage. At the top, there is a dark navigation bar with links: BROWSE BY TOPIC, BROWSE BY PARTNER, EXHIBITIONS, PRIMARY SOURCE SETS, MY LISTS, ABOUT DPLA, NEWS, and DPLA PRO. Below this is the DPLA logo (D P L A) and the text 'DIGITAL PUBLIC LIBRARY OF AMERICA'. A red 'Donate' button is in the top right. The main content area features the text 'Discover 44,463,845 images, texts, videos, and sounds from across the United States' and a search bar with the placeholder 'Search the collection' and a blue 'Search' button. Below the search bar are links for 'Browse by Topic' and 'New? Start Here'. A featured section for 'DPLA Ebooks' includes a photo of a person reading on a tablet, the text 'Ebook services are core to our commitment to a library-led digital future. We've redesigned our DPLA Ebooks site to showcase how we are helping libraries take control of acquisition and delivery and make more diverse materials easily available while advocating for the needs of libraries in the marketplace.', and a blue 'Explore now' button.

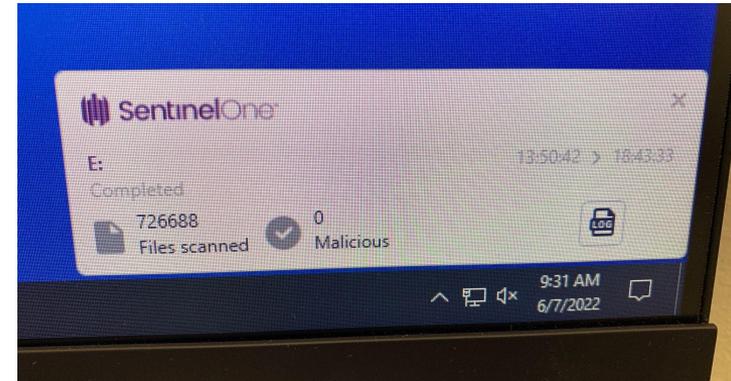
DPLA Homepage (dp.la)

FILE MIGRATION

- **Migration** involves moving data off of an old storage medium (e.g., CDs, USB flash drives, external hard drives) onto a new storage medium.
- Digital storage media can hold both born-digital files and reformatted files (digital files of analog materials)
- All storage media has a lifespan, including those that hold digital files
- With older digital files a main concern is file format obsolescence and the availability of software for access
- An important step in protecting the files is to create a copy of the files and store them in a second location
- When you want to copy files from digital storage media:
 - Run a virus check on the contents
 - Copy the files - don't delete them from the original digital storage media until you are certain everything copied over.
 - Locations where you can store the copies include a computer, external hard drive, or in cloud storage. Having the copies stored in two separate geographical locations with one offline and one online is recommended.
 - Create an inventory of the filenames, the file formats, and where the files are stored
 - Plan to migrate to a new storage system every 3-5 years depending on the lifespan of the storage system you are using.



USB Flash Drive
Image from the Museum of Obsolete Media



The status window for a recent virus scan I did of an external hard drive USU received from a vendor for A/V digitization.

PRESERVATION AND ACCESS

DIGITAL PRESERVATION

- What is digital preservation?
 - *Digital preservation combines policies, strategies and actions that ensure access to digital content over time. (ALA, 2008)*
 - This includes both born-digital and reformatted files
- Protect your digital files and the investment you made in digitization by planning for digital preservation
- You do not want to be faced with having to consider re-digitizing some of your holdings because the digital files are lost or damaged
 - Re-digitizing involves:
 - Spending money to do the same project over again
 - Exposing your holdings to the stresses of digitization again
 - No guarantee that you can access that content on the storage media again
 - Grant funders will not be interested in awarding a grant for the same project
- Risks to digital files include:
 - Environmental disasters
 - Malicious attack
 - Media degradation and obsolescence
 - Human error



DIGITAL PRESERVATION (CONT.)

- **LOCKSS** - Lots Of Copies Keeps Stuff Safe!
- Storage recommendations:
 - Maintaining a minimum of two copies of your digital files
 - Store a copy of each file:
 - in two different geographical locations with different environmental threats
 - on more than one type of storage technology
 - use a combination of online and offline storage
- Document the who, what, where and how for your files:
 - Who has access to the files
 - What files are you storing
 - Where are the files stored
 - How can you access the files
- Make sure others at your institution know about this documentation and can figure out how to access the files in your absence.



Illustration by Jørgen Stamp digitalbevaring.dk CC BY 2.5
Denmark



Functional Area	Level			
	Level 1 (Know your content)	Level 2 (Protect your content)	Level 3 (Monitor your content)	Level 4 (Sustain your content)
Storage	<p>Have two complete copies in separate locations</p> <p>Document all storage media where content is stored</p> <p>Put content into stable storage</p>	<p>Have three complete copies with at least one copy in a separate geographic location</p> <p>Document storage and storage media indicating the resources and dependencies they require to function</p>	<p>Have at least one copy in a geographic location with a different disaster threat than the other copies</p> <p>Have at least one copy on a different storage media type</p> <p>Track the obsolescence of storage and media</p>	<p>Have at least three copies in geographic locations, each with a different disaster threat</p> <p>Maximize storage diversification to avoid single points of failure</p> <p>Have a plan and execute actions to address obsolescence of storage hardware, software, and media</p>
Integrity	<p>Verify integrity information if it has been provided with the content</p> <p>Generate integrity information if not provided with the content</p> <p>Virus check all content; isolate content for quarantine as needed</p>	<p>Verify integrity information when moving or copying content</p> <p>Use write-blockers when working with original media</p> <p>Back up integrity information and store copy in a separate location from the content</p>	<p>Verify integrity information of content at fixed intervals</p> <p>Document integrity information verification processes and outcomes</p> <p>Perform audit of integrity information on demand</p>	<p>Verify integrity information in response to specific events or activities</p> <p>Replace or repair corrupted content as necessary</p>
Control	<p>Determine the human and software agents that should be authorized to read, write, move, and delete content</p>	<p>Document the human and software agents authorized to read, write, move, and delete content and apply these</p>	<p>Maintain logs and identify the human and software agents that performed actions on content</p>	<p>Perform periodic review of actions/access logs</p>
Metadata	<p>Create inventory of content, also documenting current storage locations</p> <p>Backup inventory and store at least one copy separately from content</p>	<p>Store enough metadata to know what the content is (this might include some combination of administrative, technical, descriptive, preservation, and structural)</p>	<p>Determine what metadata standards to apply</p> <p>Find and fill gaps in your metadata to meet those standards</p>	<p>Record preservation actions associated with content and when those actions occur</p> <p>Implement metadata standards chosen</p>
Content	<p>Document file formats and other essential content characteristics including how and when these were identified</p>	<p>Verify file formats and other essential content characteristics</p> <p>Build relationships with content creators to encourage sustainable file choices</p>	<p>Monitor for obsolescence, and changes in technologies on which content is dependent</p>	<p>Perform migrations, normalizations, emulation, and similar activities that ensure content can be accessed</p>



PRESERVATION MASTER & ACCESS COPY

Preservation Master:

- High-quality
- Larger file size
- Not for loading on your website
- Restrict access
- Focus of your digital preservation efforts

Access/Distribution Copy:

- Lower quality
- Smaller file size
- Good for loading onto a website
- Share copies with patrons
- Preservation is not a high priority



RETAINING OR DISCARDING OBSOLETE STORAGE MEDIA

After digitization, do you need to keep your obsolete storage media?

- Reasons to keep:
 - Retain it as an artifact of an obsolete storage medium
 - Value by association; part of the collection of a prominent person
 - Does the donor agreement or institutional policies have restrictions of discarding items
 - Long-term access to the storage media is still desired and possible
 - Serve as a last resort back-up of the content
- Reasons to discard:
 - The storage media was damaged during digitization
 - Physical storage space is limited
 - You have a digital preservation plan in place and you are comfortable with discarding the object
- Communicate with all stakeholders before discarding



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PROVIDING ACCESS

- Use your institution's website
- The vendor hosts the content and you link to the vendor's website from your website
- Free or low-cost sites
- Make a finding aid or inventory available to your patrons (online or in your physical location)
 - Include instructions on how the patron can request access to a file



The image shows two overlapping screenshots. The top one is a digital library search results page from Southern Utah University (SUU). It features the university's logo and name, a search bar, and a list of search results for 'Abandoned Buildings'. The bottom screenshot is a webpage for the 'BARNES PHOTO ARCHIVE' at the Moab Museum. It has a large header image of a desert landscape with the text 'BARNES PHOTO ARCHIVE' overlaid. Below the header is a welcome message and a short biography of Francis A. 'Fran' Barnes, a photographer and writer. A 'Read the story' button is visible. At the bottom, there is a row of small thumbnail images from the archive and another 'Explore the Barnes Photo Archive' button.

ACCESSIBILITY

- Transcription for audio files
- Captioning for video files
- Can do this in-house or use a vendor
 - Possible volunteer project
 - Look for best practices to implement
 - There is equipment and software that can help with this type of work



LAND USE MANAGEMENT TRANSCRIPTION COVER SHEET

Interviewee: Ron Goede
Place of Interview: Ron Goede's home in Logan, Utah
Date of Interview: 16 October 2008

Interviewer: Elaine Thatcher and Brad Cole
Recordist: Elaine Thatcher

Recording Equipment: Marantz PMD660 Digital Recorder

Transcription Equipment used: Power Player Transcription Software;
Executive Communication Systems

Transcribed by: Glenda Nesbit
Transcript Proofed by: Elaine Thatcher, Randy Williams (3/09; July 2011); Ron Goede reviewed (27 July 2011)

Brief Description of Contents: Ron discusses his family life, education in Nebraska in a German and Russian German communities, undergraduate work University of Nebraska, involvement with the Air National Guard as an aircraft mechanic, graduate studies at Utah State University in fisheries, and his career in fisheries in Utah.

Reference: ET = Elaine Thatcher (Interviewer; Director, USU Mountain West Center for Regional Studies)
BC = Brad Cole (Interviewer; Associate Dean, USU Libraries)
RG = Ron Goede

NOTE: Interjections during pauses or transitions in dialogue such as “uh” and starts and stops in conversations are not included in transcribed. All additions to transcript are noted with brackets.

TAPE TRANSCRIPTION

DISC One

ET: This is Elaine Thatcher and Brad Cole. We are with Ron Goede at his home in Logan. And it is October 16, 2008. And it's about 2:15 in the afternoon. And so we're going to talk with Ron about his career in fisheries and whatever else comes up in the conversation. So Ron, why don't you start by stating your full name your birthday and birth place?

RG: Okay. Well my full name is Ronald William Goede. G O E D E. I've gotten used to that all the time now. So I remember. I was born in Columbus, Nebraska on April 4, 1934. Let's see what all do we need now.

A RETURN TO ERWAY'S FOUR PRINCIPLES

Ricky Erway's four essential principles for responsible management of files received on physical media:

1. *Do no harm (to the physical media or the content).*
2. *Don't do anything that unnecessarily precludes future action and use.*
3. *Don't let the first two principles be obstacles to action.*
4. *Document what you do.*



"The History of Tape Storage" by Pargon is licensed under CC BY 2.0.

FUNDING OPPORTUNITIES

- Utah State Historical Records Advisory Board (USHRAB) Grant Program
 - <https://archives.utah.gov/USHRAB/grants.html>
- IMLS Inspire Grants for Small Museums
 - <https://www.imls.gov/grants/available/inspire-grants-sm-all-museums>
- NEH Preservation Assistance Grants for Smaller Institutions
 - <https://www.neh.gov/grants/preservation/preservation-assistance-grants-smaller-institutions>
- Utah Division of Arts and Museums General Operating Support
 - <https://artsandmuseums.utah.gov/general-operating-support-gos-grants/>



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ADDITIONAL TRAINING OPPORTUNITIES

- **American Institute for Conservation/Foundation for Advancement in Conservation (AIC/FAIC)**
 - Planning and Managing Magnetic Media Preservation Projects (\$89)
 - <https://learning.culturalheritage.org/products/c2c-care-course-planning-and-managing-magnetic-media-preservation-projects>
 - Physical Media to Digital Storage: Migrating Audiovisual Files in Museum Collections (Free)
 - <https://learning.culturalheritage.org/products/physical-media-to-digital-storage-migrating-audiovisual-files-in-museum-collections>
- **Digital Preservation Coalition (DPC)**
 - Novice to Know-How: Online Digital Preservation Training (Free)
 - <https://www.dpconline.org/digipres/train-your-staff/n2kh-online-training>
- **Northeast Document Conservation Center (NEDCC)**
 - List of Current Trainings (Registration Fee)
 - <https://www.nedcc.org/preservation-training/training-currentlist>
 - List of On-demand Preservation Training Videos (Free)
 - <https://www.youtube.com/playlist?list=PLSqxpHY476Jy1ffYgdE6JahUxhHvoK155>
 - Writing Grants for Audio Preservation and Reformatting
 - <https://youtu.be/egzNZklwiEs>



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